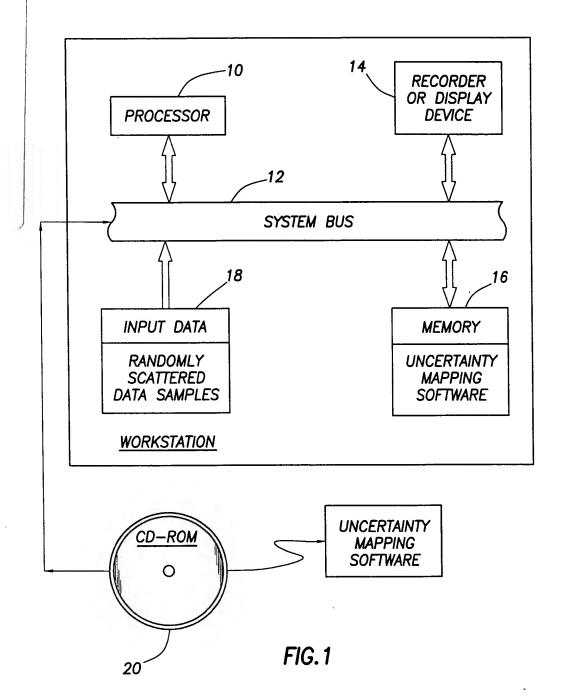
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OCT 0 8 2003 A BADEMAN 2/22 FIG.2 USING A HORIZONTAL SLICE THROUGH A RANDOMLY PREDETERMINED VOLUME OF EARTH **SCATTERED** INCLUDING A PLURALITY OF WELLBORES, UNCERTAINTY DATA GENERATE A CROSS SECTION WHICH MAPPING **SAMPLES** INCLUDES A PLURALITY OF PARAMETER SOFTWARE DATA, SUCH AS POROSITY 16 22 GRID THE CROSS SECTION 24 PROVIDE THE GRIDDED CROSS SECTION INCLUDING 26 THE PLURALITY OF PARAMETER DATA REPRESENTING A PLURALITY OF SCATTERED DATA SAMPLES (44a, 44b, 44c, AND 44d) AS INPUT DATA TO A KRIGING ALGORITHM; EXECUTÉ THE KRIGING ALGORITHM USING THAT INPUT DATA; GENERATE A SECOND GRIDDED CROSS SECTION WHERE EACH INTERSECTION OF THE SECOND GRIDDED CROSS SECTION INCLUDING A "PARTICULAR INTERSECTION" HAS AN EXPECTED MEAN VALUE OF THAT PARAMETER AND A STANDARD DEVIATION: AND GENERATE A PROBABILITY DENSITY FUNCTION (PDF) FROM EACH EXPECTED VALUE AND STANDARD DEVIATION ASSOCIATED WITH EACH OF THE INTERSECTIONS 28 INTEGRATE EACH PROBABILITY DENSITY FUNCTION (PDF) TO OBTAIN A 35 CUMULATIVE DISTRIBUTION FUNCTION (CDF) 30 INPUT A "PROBABILITY" CHOOSE A "CON-INPUT A "CUTOFF" FIDENCE LEVEL" ALONG THE Y-AXIS OF ALONG THE X-AXIS THE CDF AND OBTAIN ON THE Y-AXIS OF THE CDF AND A LOWER CUTOFF "Xp" ON OF THE CDF AND OBTAIN A "PROB-OBTAIN A "LOWER LIMIT", A "SPREAD" AND AN "UPPER THE X-AXIS OF THE CDF ABILITY (1-Pcu)" ON THE Y-AXIS LIMIT" ON THE -32 "Xp"-X-AXIS OF

AFFINE CORRECTION

Α

37

"(1-Pcu)

THE CDF

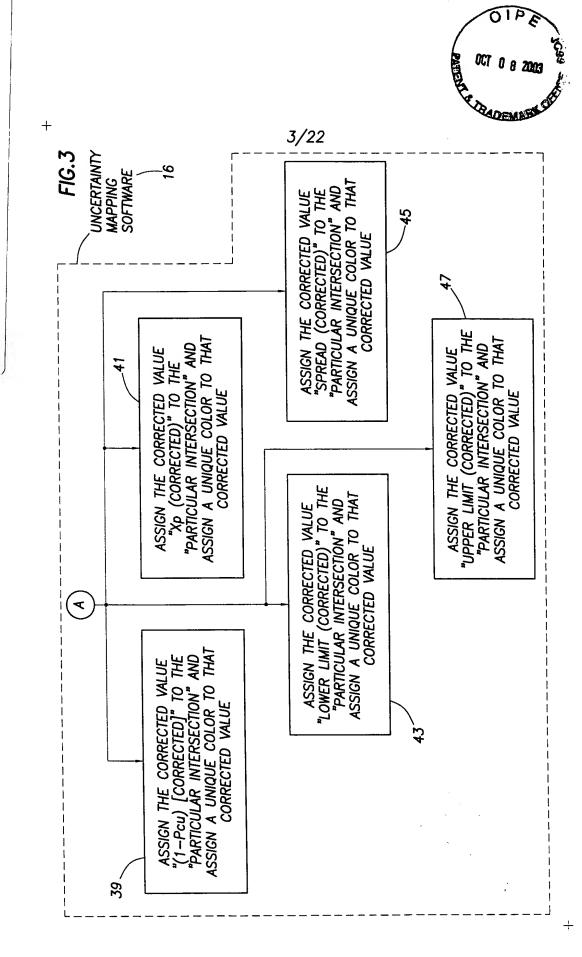
"Lower Limit"

"SPREAD" "UPPER LIMIT"



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FIG.4

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36

WELLBORES

WELLBORES

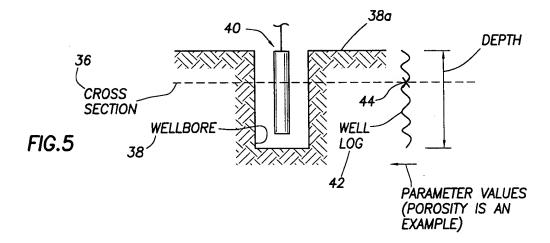
44a

WELLBORES

38

WELLBORES

38



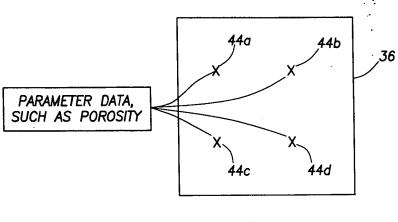
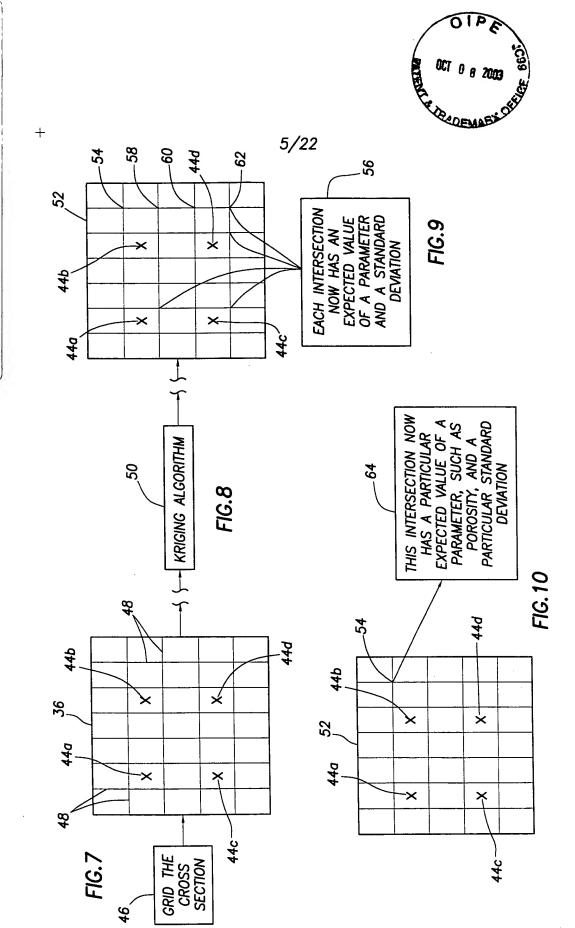


FIG.6

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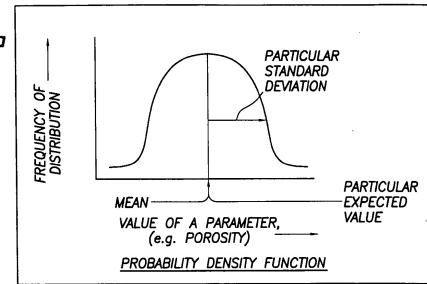
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FIG.10a

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FIG. 11

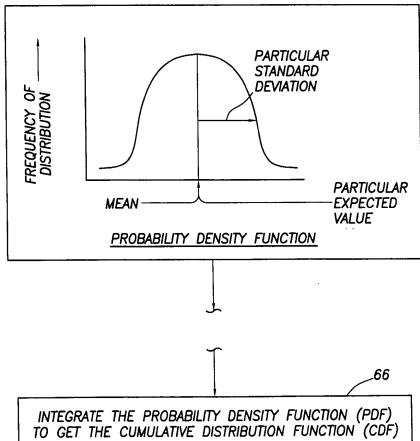
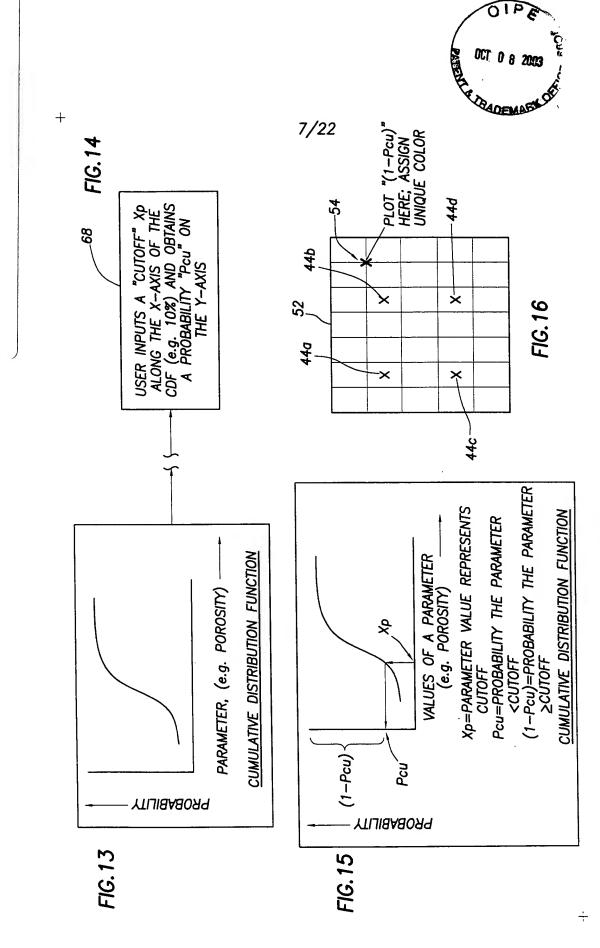


FIG.12

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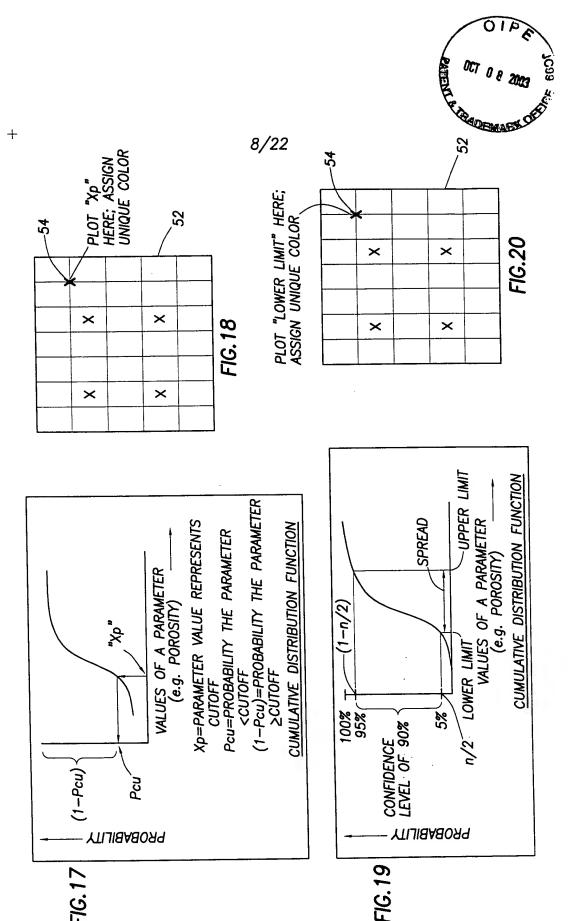
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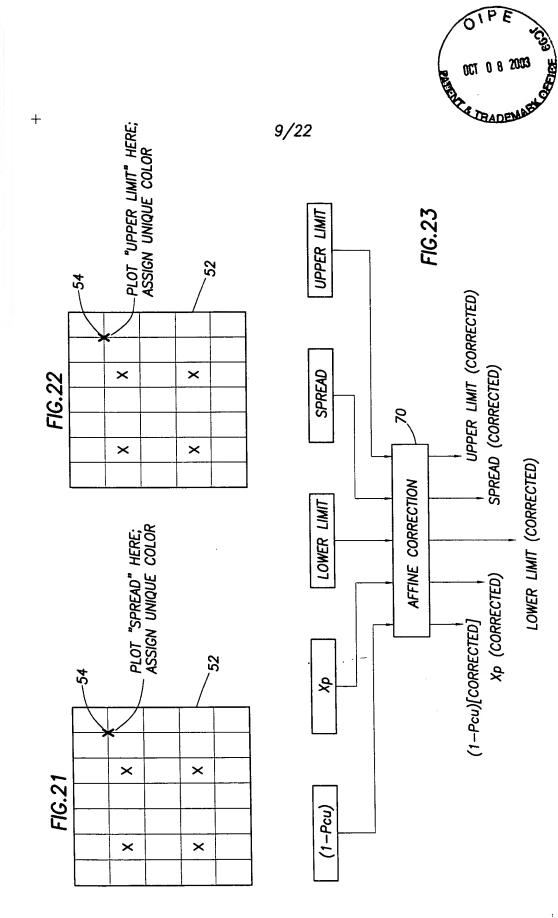
U.S. Serial No. 09/520,259
Title: METHOD AND APPARATUS FOR MAPPING UNCERTAINTY ANDGENERATING A MAP OR A CUBE BASED ON CONDITIONAL SIMULATIONOF RANDOM VARIABLES Applicant: Peter P. Van Bernmel
Pited: 03/07/2000
Dkt. No. 94.0027

Dkt. No. 94.0027 Tel: (713) 513-2515 Atty: Danita J.M. Maseles

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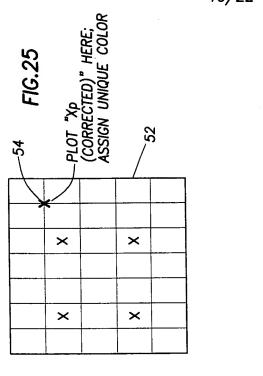


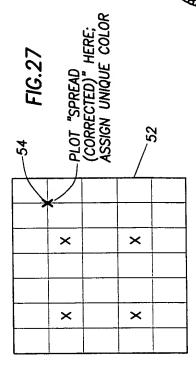
U.S. Serial No. 09/520,259
Title: METHOD AND APPARATUS FOR MAPPING UNCERTAINTY ANDGENERATING A
MAP OR A CUBE BASED ON CONDITIONAL SIMULATIONOF RANDOM VARIABLES
Applicant: Peter P. Van Bemmel
Filed: 03/07/2000
Dkt. No. 94,0027
Atty: Danita J.M. Maseles
Tel: (713) 513-2515

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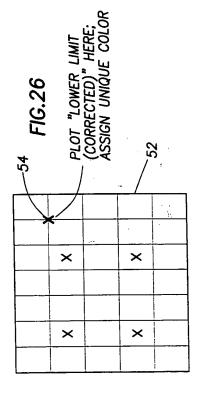
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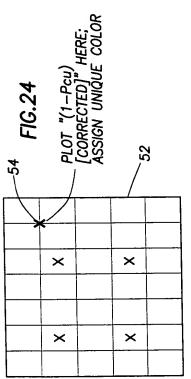




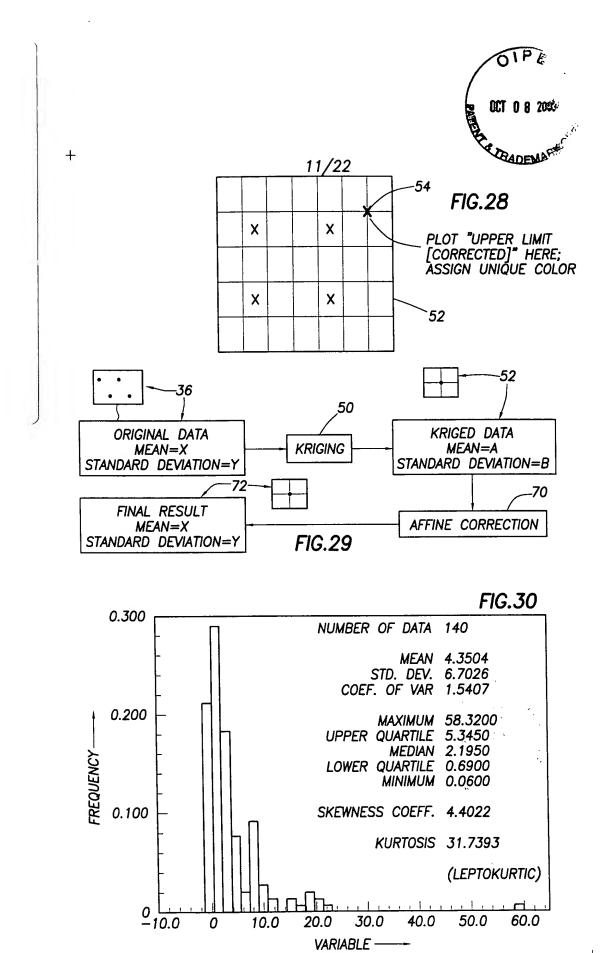
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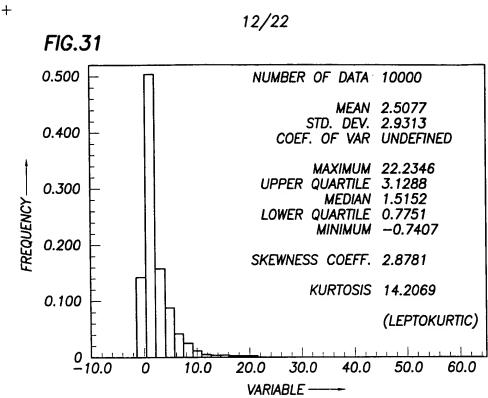


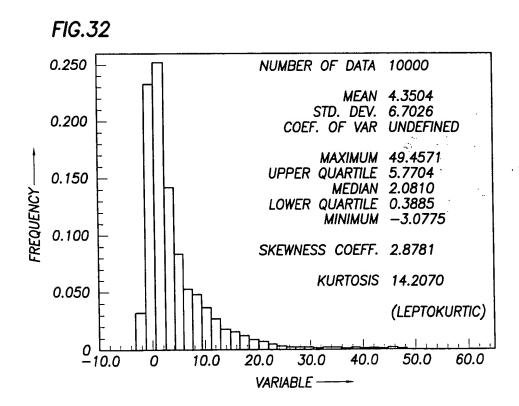


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FIG.33

	FIG.33a	FIG.33b
	FIG.33c	FIG.33d

FIG.33a

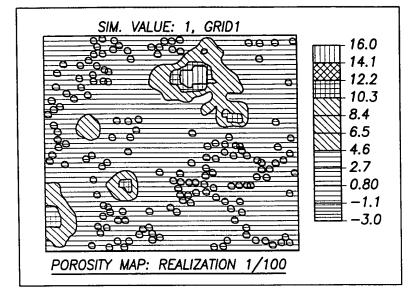
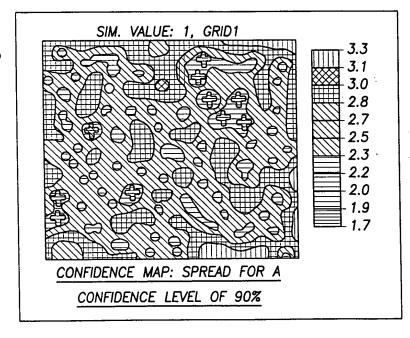


FIG.33b



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FIG.33c

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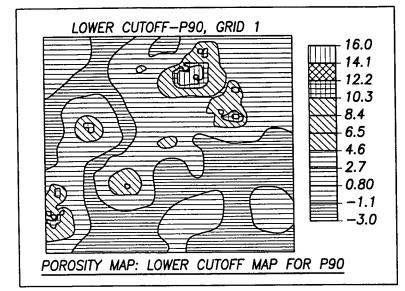
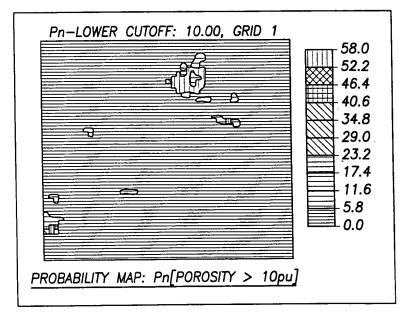


FIG.33d



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FIG.34

FIG.34a	FIG.34b
FIG.34c	FIG.34d

FIG.34a

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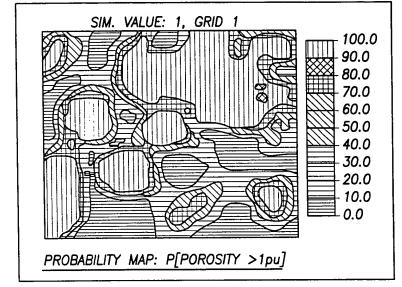
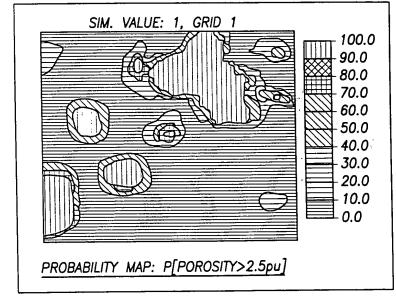


FIG.34b



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FIG.34c

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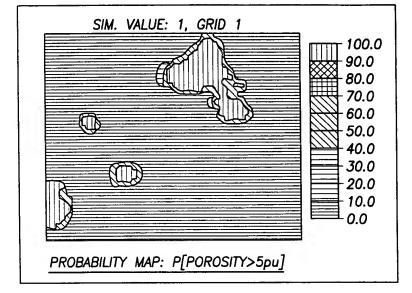
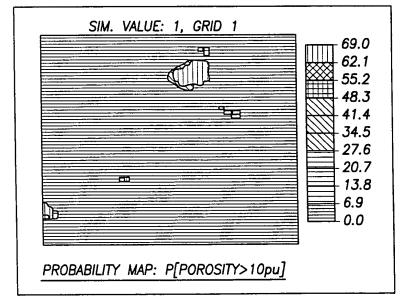


FIG.34d



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FIG.35

FIG.35a	FIG.35b
FIG.35c	FIG.35d

FIG.35a

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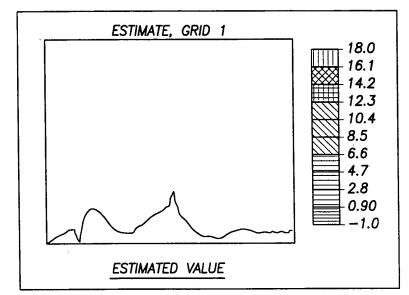
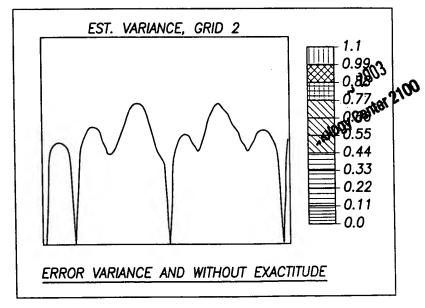
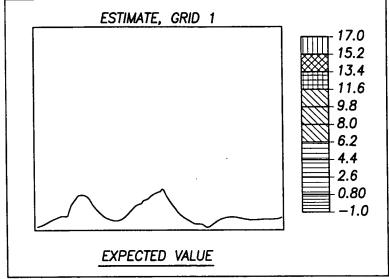


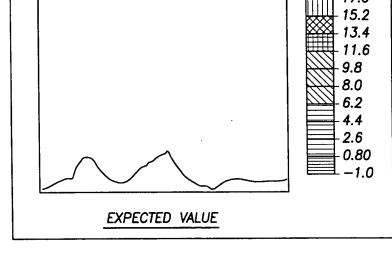
FIG.35b



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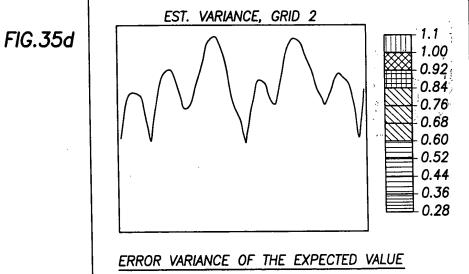
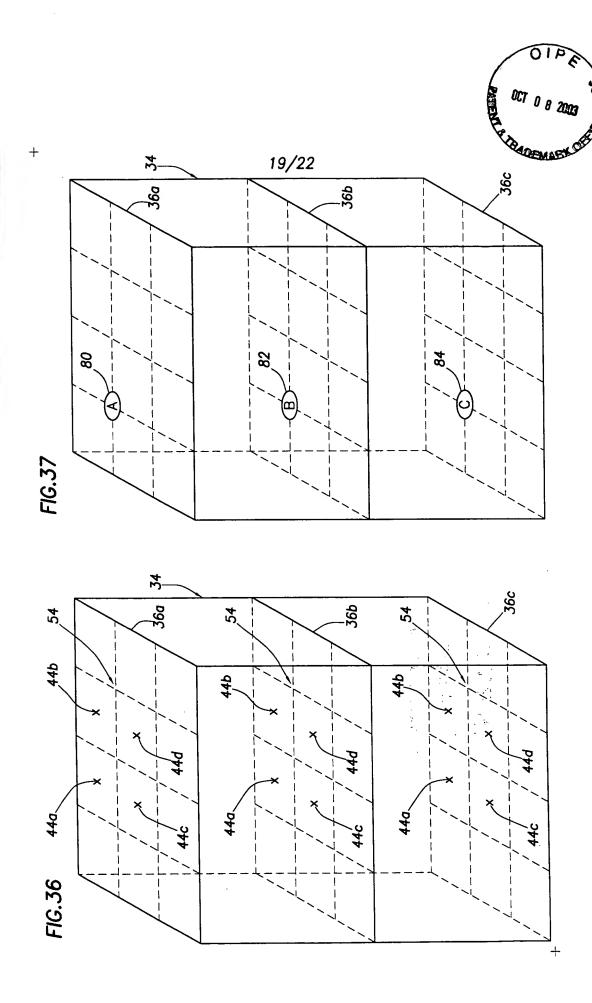
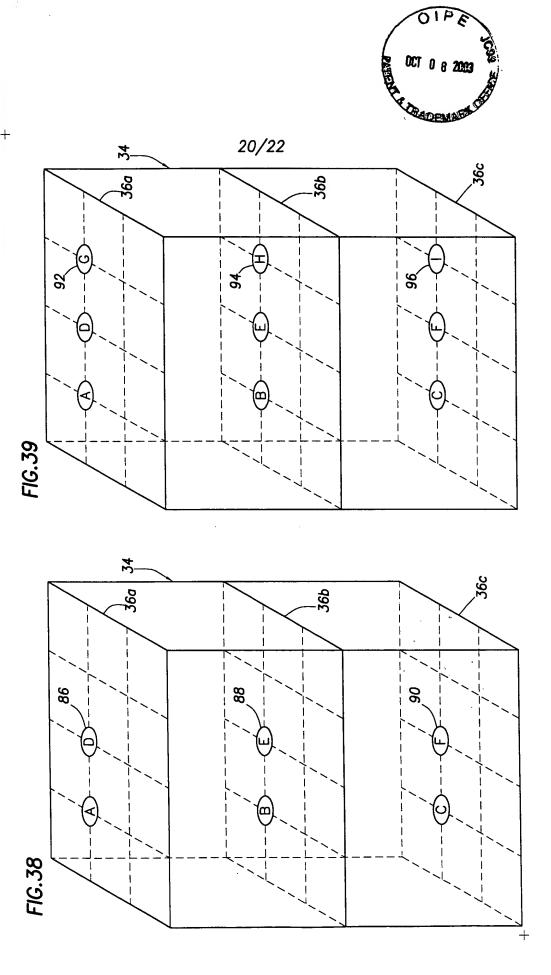


FIG.35c

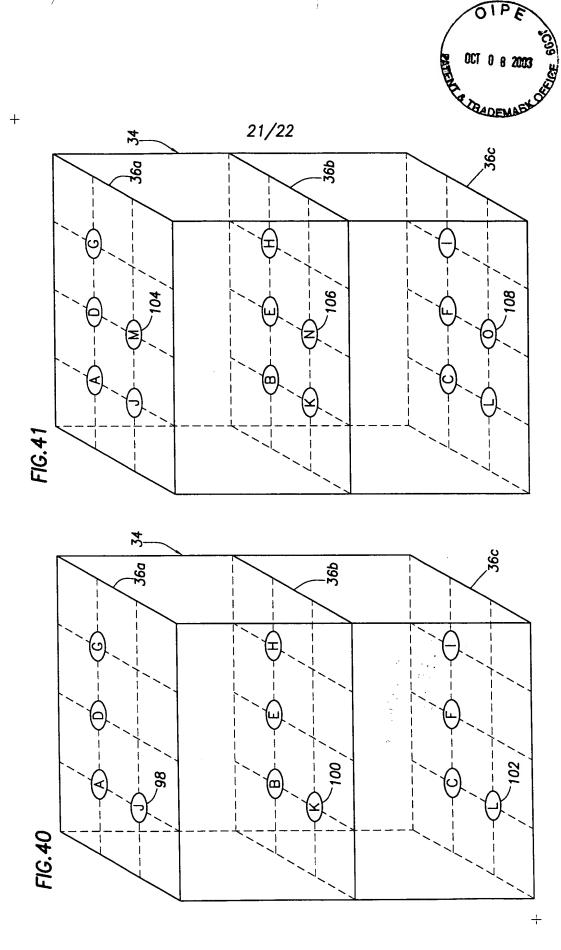
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